DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-007697
Date Inspected: 07-Jul-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 730
OSM Departure Time: 1630
Location: Muroran, Japan

CWI Name: Chung Fu Kuan

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking, and Deviation Saddles

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. Art Peterson was present during the times noted above for observations relative to the work being performed in Fabrication shop #4 at Japan Steel Works.

Machine Shop #4:

Final Machining Operation in process on Saddle: Tower Saddle Segment T1-1

The QA Inspector observed that tower saddle segment T1-1 is located in Machine Shop #4 to have the final machining performed. On this date, the QA Inspector observed the JSW personnel were in process on drilling holes on the edge of the upper stiffener plate on the north cable trough side of tower saddle segment T1-1.

Fabrication Shop #4:

Weld Operation in process on Saddle: Tower Saddle Segment T1-2

The QA Inspector observed the partial-joint penetration (PJP) weld operation on the middle stiffener plates welded to the stem plate (cast section) of tower saddle T1-2. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the PJP weld operation that the minimum preheat temperature of 150 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. M. Kashiwada (08-2008) on plate no. 8ST-20 and Mr. T. Inoue (08-5163) on plate no. 8ST-23 were in compliance with WPS SJ-3012-8-2 per the FCAW process in the (1G) flat position using (1.6) mm diameter TM55 electrode. The QA Inspector observed that the PJP weld operation was in process at the end of the QA Inspectors' shift.

Weld Operation in process on Base Plate of Saddle: Tower Saddle Segment T1-3

The QA Inspector observed the complete-joint penetration (CJP) weld operation on the rib welded to the base

plate of tower saddle T1-3. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the PJP weld operation that the minimum preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. R. Iizuka (06-2643) on weld joint no. 9Y-12L-2 and Mr. K. Nakasato (91-2247) on weld joint no. 9Y-5L-1 / 9Y-5L-2 were in compliance with WPS SJ-3012-2 per the SMAW process in the (2G) horizontal position using (4.0 and 5.0) mm diameter LB-52A electrode. The QA Inspector observed that the CJP weld operation was in process at the end of the QA Inspectors' shift.

Storage of Saddle: West Deviation Saddle Segment W2-E1

The QA Inspector observed that west deviation saddle segment W2-E1 is located in Fabrication Shop #4. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-E1 on this date.

Storage of Saddle: West Deviation Saddle Segment W2-E2

The QA Inspector observed that west deviation saddle segment W2-E2 is located in Fabrication Shop #4. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-E2 on this date.

Machine Shop #2

Final Machining Operation in process on Saddle: West Deviation Saddle Segment W2-E3

The QA Inspector observed that west deviation saddle segment W2-W3 is located in Machine Shop #2 to have the final machining performed. On this date, the QA Inspector observed JSW personnel performing the milling operation on the end rib plate to final thickness dimensions on west deviation saddle segment W2-E3.

Fabrication Shop #4

NDT Operation completed on Saddle: West Deviation Saddle Segment W2-W1

The QA Inspector observed that the magnetic particle test (MPT) inspection (dry method) has been completed on the partial-joint penetration (PJP) groove welds and adjacent base metal of west deviation saddle W2-W1. The QA Inspector observed that their were areas that have been marked up by Nikko Inspection Services (NIS) NDT QC Inspectors that will require rework- (grinding) to determine the extent of the rejectable indications. On this date, the QA Inspector observed that no other work was performed on west deviation saddle segment W2-W1.

Weld Operation in process on Saddle: West Deviation Saddle Segment W2-W2

The QA Inspector observed the partial-joint penetration (PJP) groove (fill pass) weld operation on the rib plate (steel section) to rib (cast section) of west deviation saddle segment W2-W2. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the PJP groove weld operation that the minimum preheat temperature of 160 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. T. Isobe (08-5176) on weld joint no. W2Y-7U (plate 5-9) side and Mr. Y. Maeyama (94-5234) on weld joint no. W2Y-16U (plate 5-17) side were in compliance with WPS SJ-3011-7 per the FCAW-G process in the (1G) flat position using (1.6) mm diameter TM95 electrode. The QA Inspector observed that the PJP groove (fill pass) weld operation was in process at the end of the QA Inspectors' shift.

NDT Operation completed on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) NDT Inspector Mr. R. Kumagai (#132) completed the magnetic particle test (MPT) inspection (dry method) of the partial-joint penetration (PJP) groove welds after the intermediate post weld heat treatment (PWHT) stress relief operation on

the rib plate to stem plate; stem plate to base plate; and the rib plate to base plate of west deviation saddle segment W2-W3. The next operation will be to prepare / machine the groove areas on the rib plates and stem plate to meet the mill to bear tolerances that will be required when the cast section is fit to the fabricated section. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-W3.

Buttering Operation pending on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed that the weld surfacing (buttering operation / build-up of weld metal) on the exterior of the end rib on west deviation saddle segment W2-W3 (cast section) has not been completed. On this date, the QA Inspector observed that no other work was being performed on west deviation saddle segment W2-W3.

Layout Operation on "Hold" of Rocker Bearing Plate Assembly: East Saddle E2-W1

The QA Inspector observed that rocker bearing plate assembly for E2-W1 is located in Machine Shop #2. The JSW personnel were in preparation to perform the layout operation of the rocker bearing dowel locations against the approved dimensional drawings and assembly control lines but the operation has been put on "hold". The JSW Representative Mr. Hideaki Kon informed the QA Inspector that one of the reasons why the layout operation was put on "hold" was that JSW is waiting the response back from prime contractor American Bridge Fluor / JV regarding the confirmation of the location of the anchor bolt holes on east saddle rocker bearing plate E2-W1.

NDT Operation completed on End Splay Cover Plate Assemblies: East Saddle E2-E1 and E2-W1

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) NDT Inspector Mr. R. Kumagai (#132) completed the magnetic particle test (MPT) inspection (dry method) of the complete-joint penetration (CJP) groove welds and fillet welds on the cover plate stiffeners and diaphragm plates located between the cover plate stiffeners on end splay cover plate assemblies for E2-E1 and E2-W1. The QA Inspector observed that no other work was performed on the end splay cover plate assemblies for east saddle E2-E1 and E2-W1. The next operation for the end splay cover plate assemblies will be the machining operation.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with the applicable contract specifications.

Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 510 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Guest,Kittric	QA Reviewer